Amendments to the Specification:

Please replace the paragraph on page 7, lines 4 to 12:

Airports: Everyone is familiar with the rush of crowds at airports on any given day, as tens of thousands of people rush from point to point attempting to make connections, keep track of their family members and luggage, grab a bite to eat, and shop. There is a need for an inexpensive, reliable people traffic monitoring system, which will allow airport authorities, vendors, and others to plan effectively based on this flow of people. In today's security threats it should ~~enables~~ enable better control during an emergency event, such as knowing the number of people in each wing, section, hall and room.

Please replace the paragraph on page 7, lines 13 to 21:

Transportation – Trains: High volume commuter rail systems can greatly benefit by understanding the number of passengers that make use of their service. Ticket sales data provides information regarding paying passengers, types of tickets sold, etc., however ticket sales do not provide information regarding the actual number of passengers making use of the train service in specific travel. Moreover, the distribution of passengers between the train's carriages is important for optimization of the size of the train. During emergency events, knowing the number of people per ~~cart~~ carriage is critical.

Please replace the paragraph on page 36, line 18 to page 37, line 2:

During this second run of the segmentation step (FIG. 5, 240), important information is collected on the labeled component: how many pixels it contains, and what are the parameters of the circumscribing rectangle (maximal and minimal x, maximal and minimal y). Additional parameters can be computed from these basic ones: aspect ratio of the segment (~~heigh~~ height/width) and fill ratio (number of pixels/area of circumscribing rectangle). The end result of this processing is a list of segments, or objects, each with its measured properties. A member of this list can henceforth be called a "hot object".